

Figure 1: System Model

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TITLE: AUDIO IDENTIFICATION SYSTEM AND METHOD

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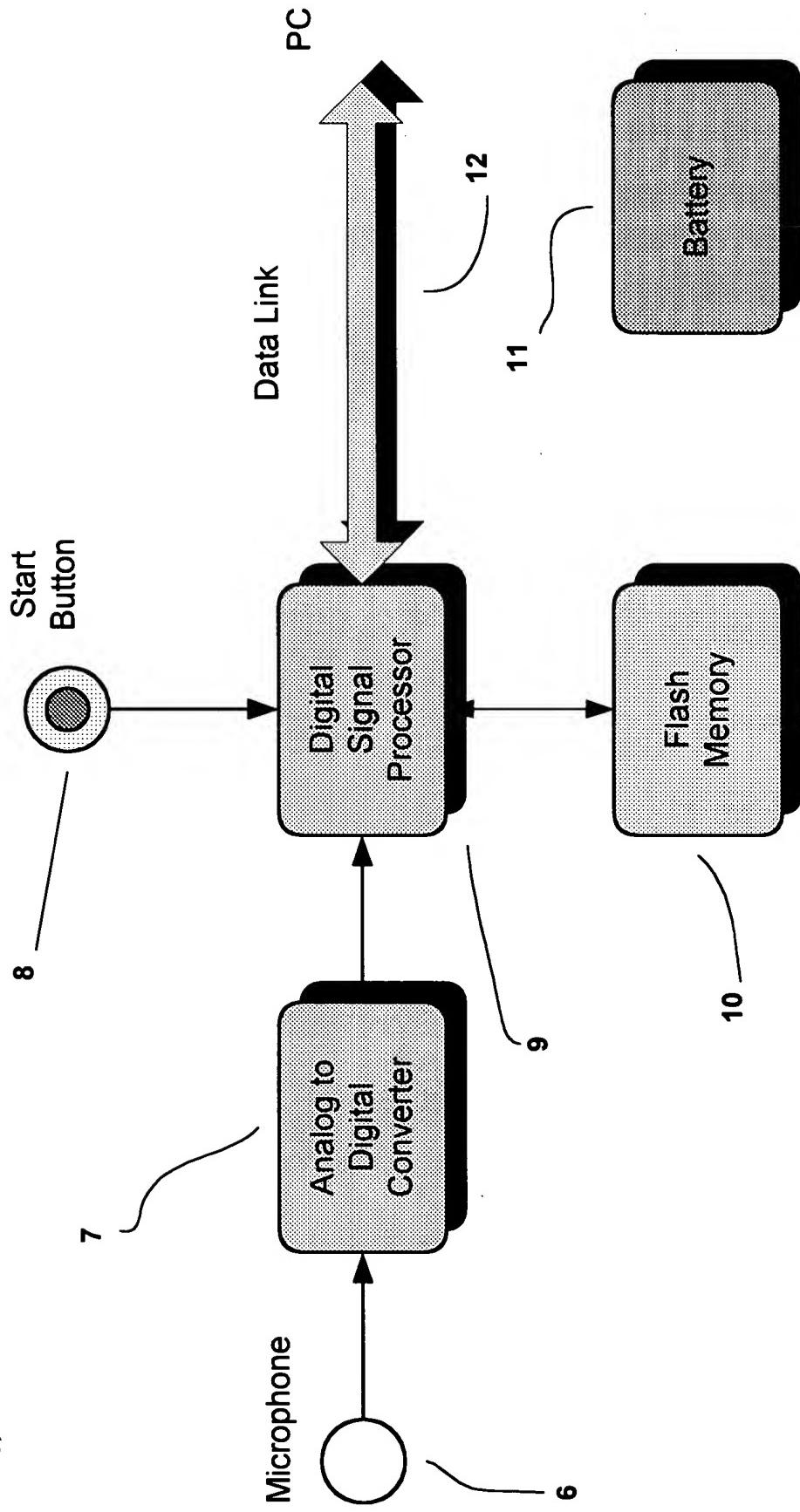


Figure 2: Typical Audio Capture Device

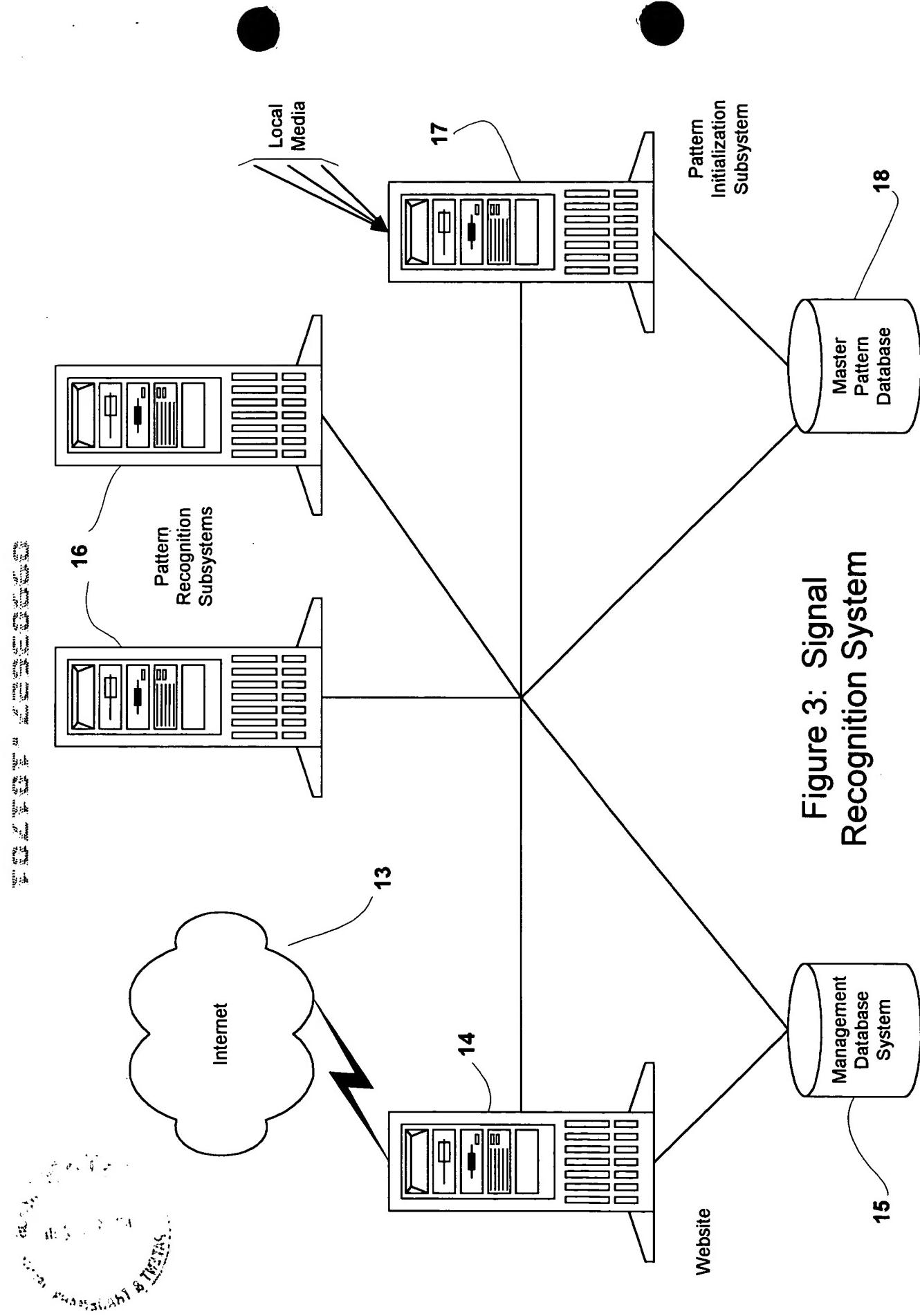


Figure 3: Signal Recognition System

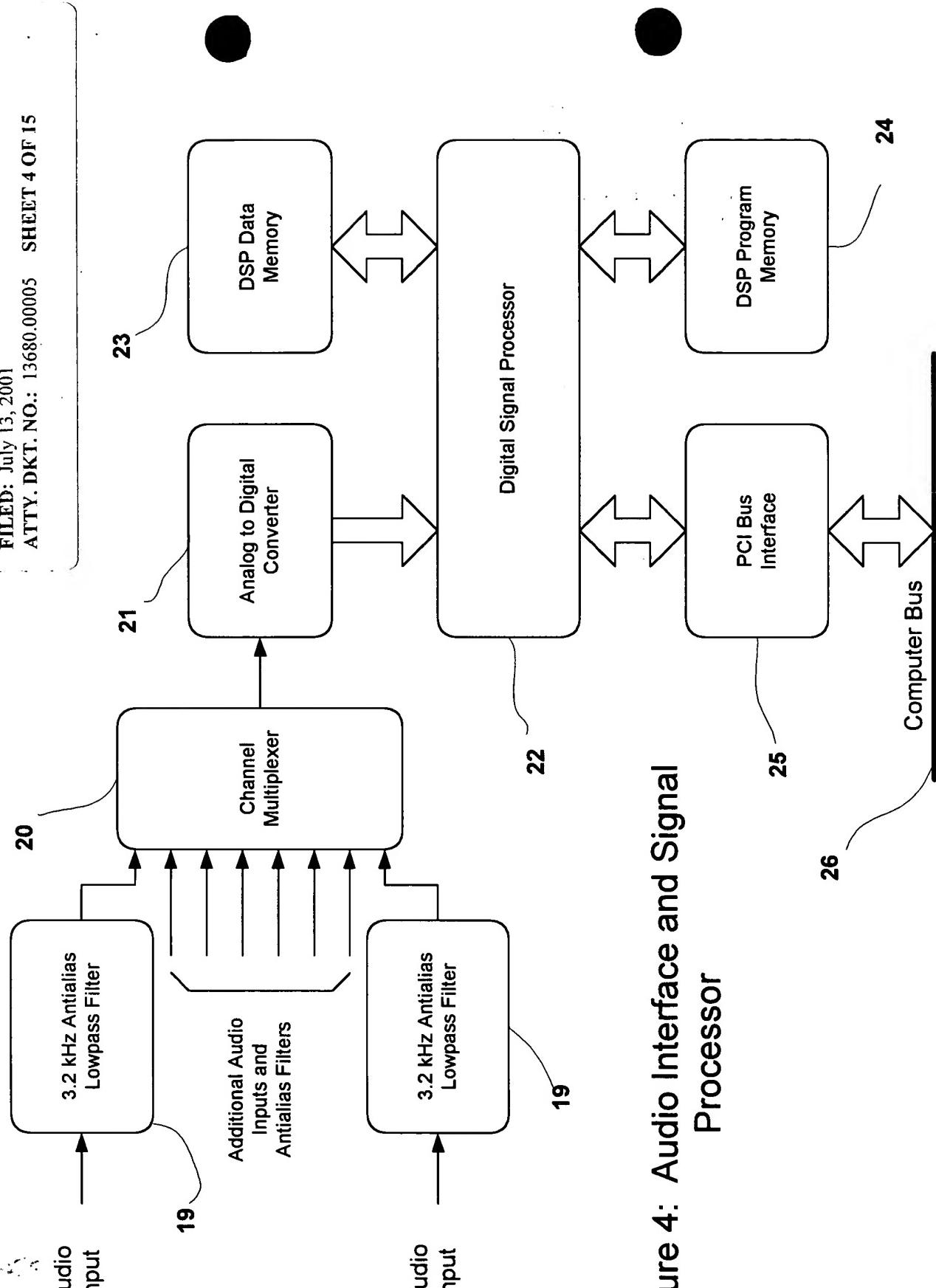


Figure 4: Audio Interface and Signal Processor

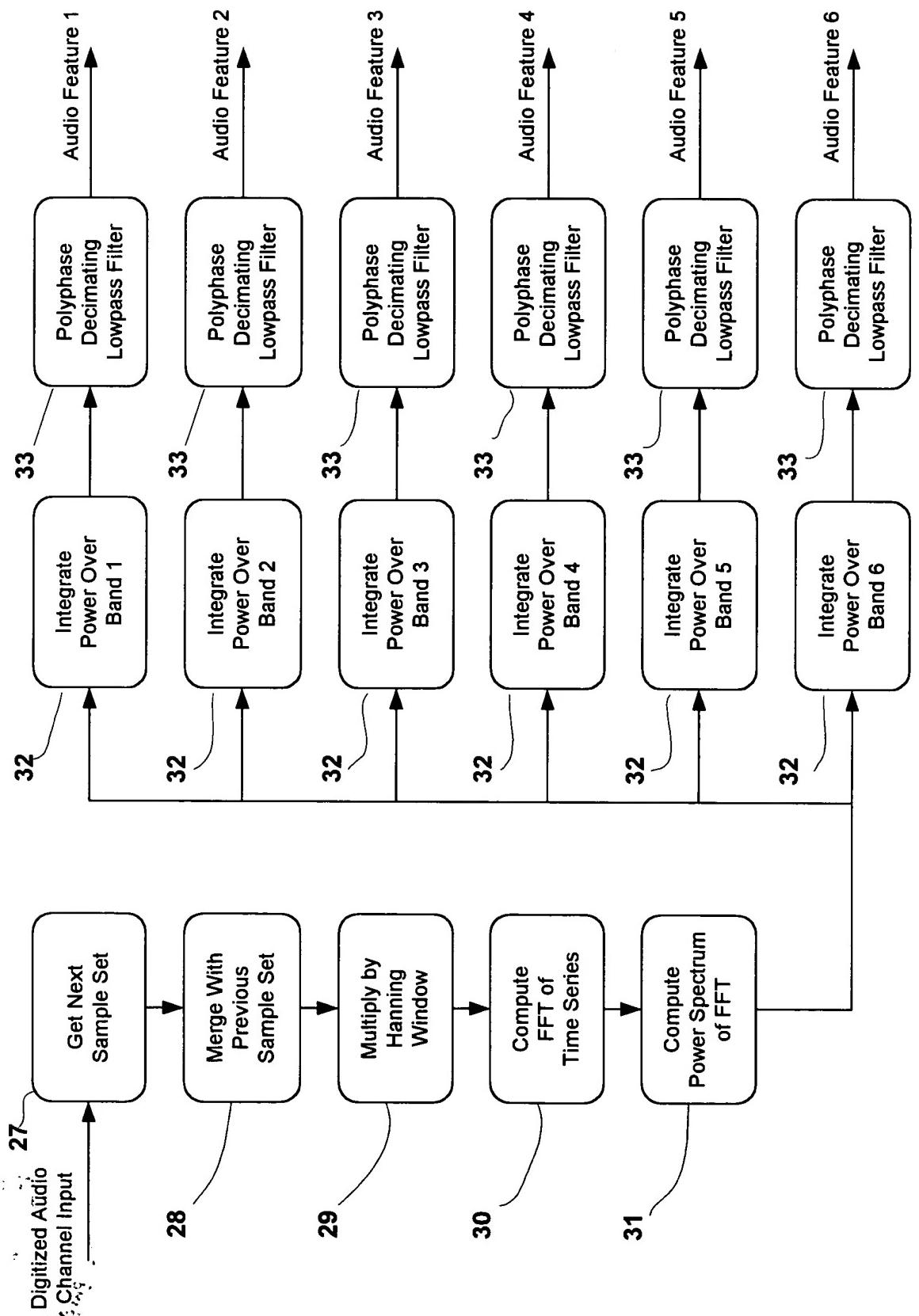


Figure 5: Audio Spectrum Analysis and Feature Extraction

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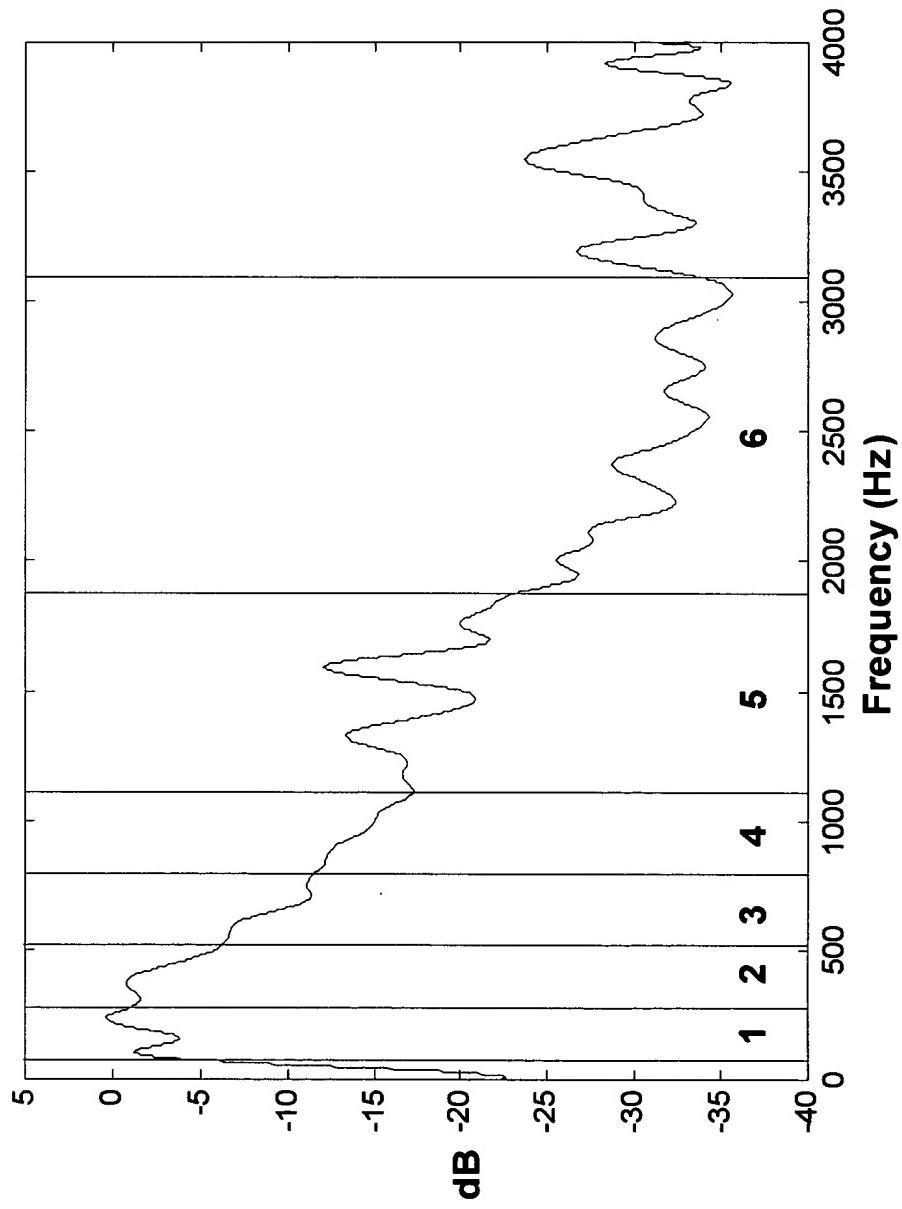


Figure 6: Audio Spectrum Analysis Bands

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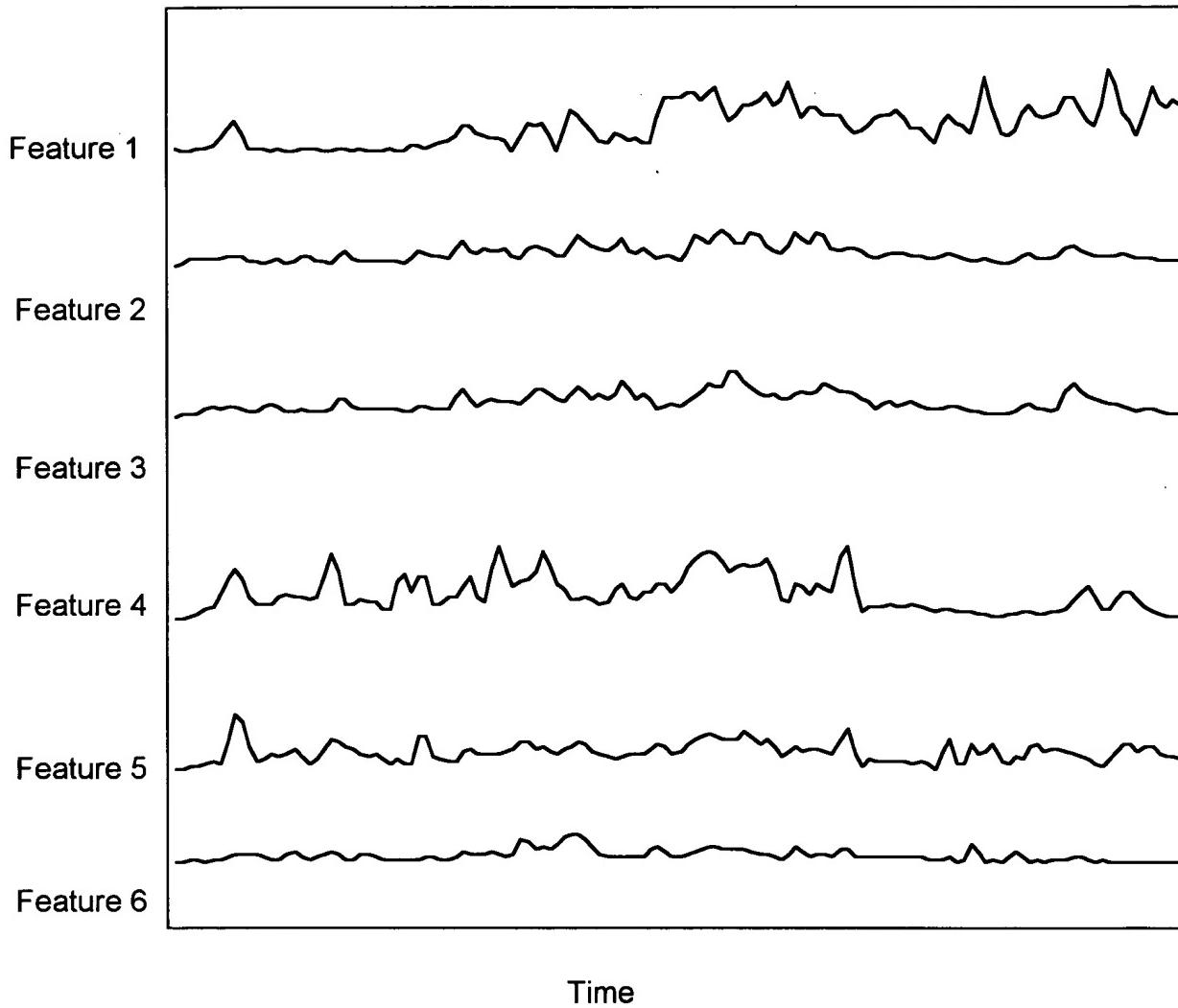


Figure 7: Example Feature Waveforms

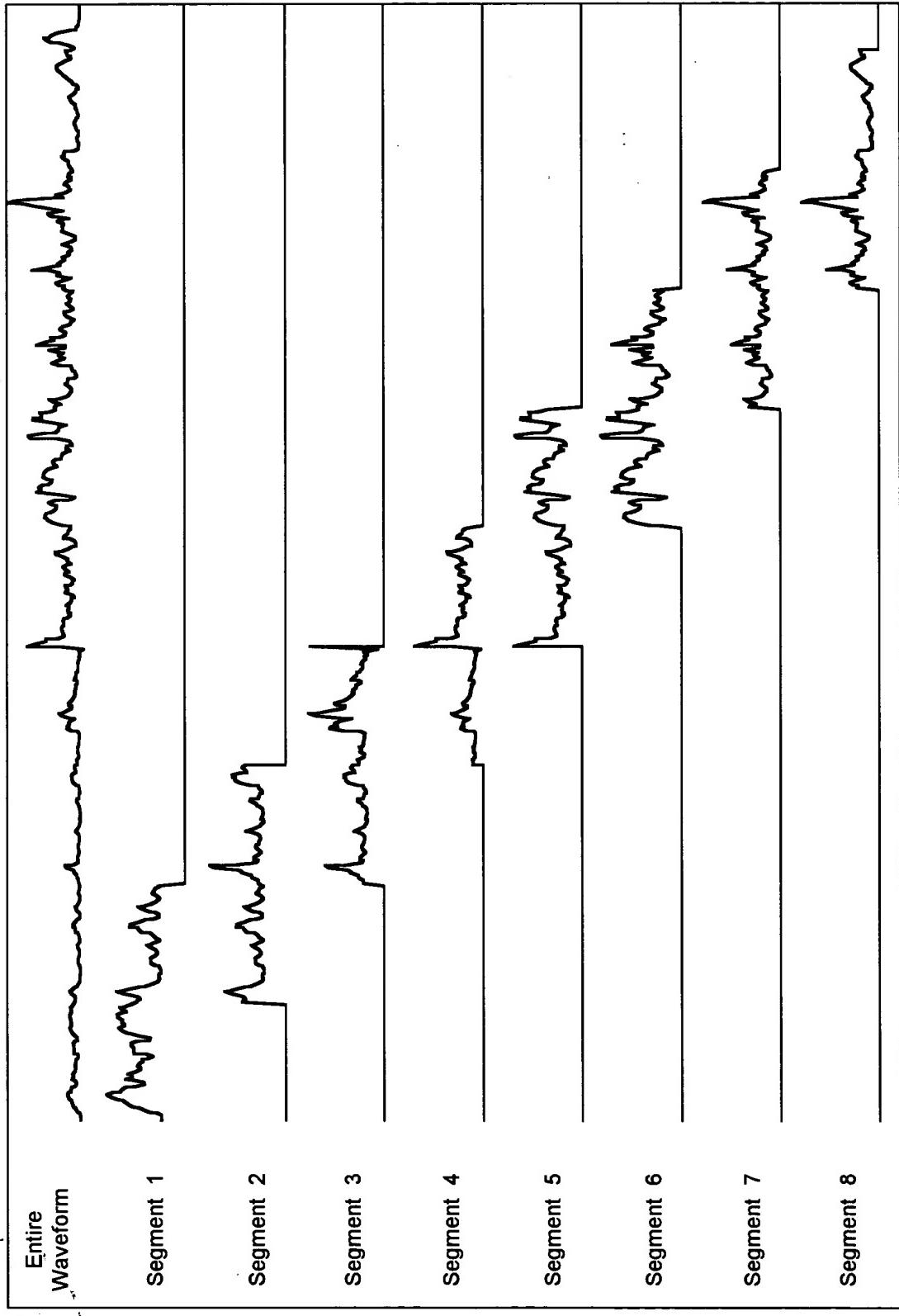


Figure 8: Reference Feature Waveform Segmentation

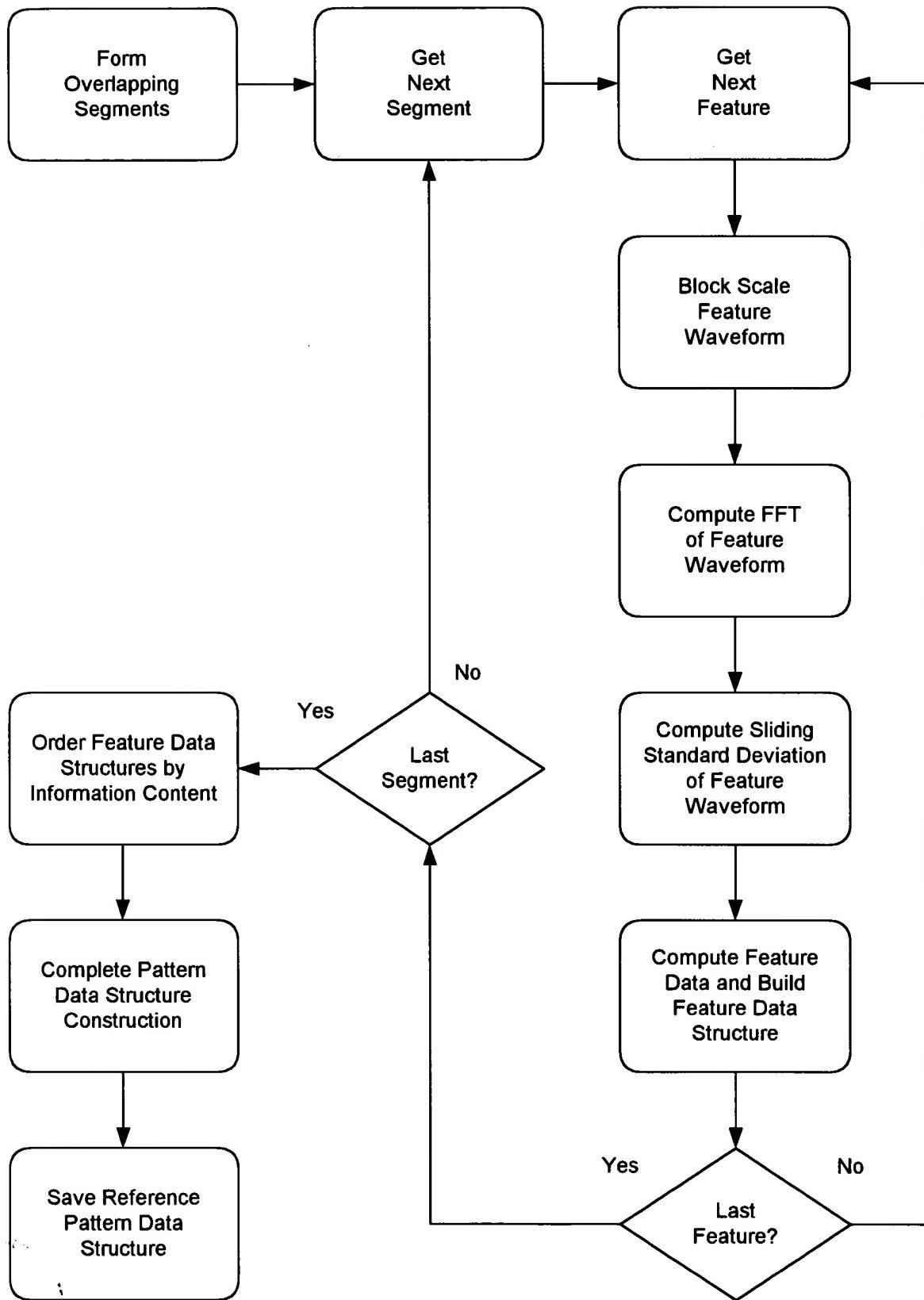


Figure 9: Reference Pattern Initialization

44
43
45
46
47

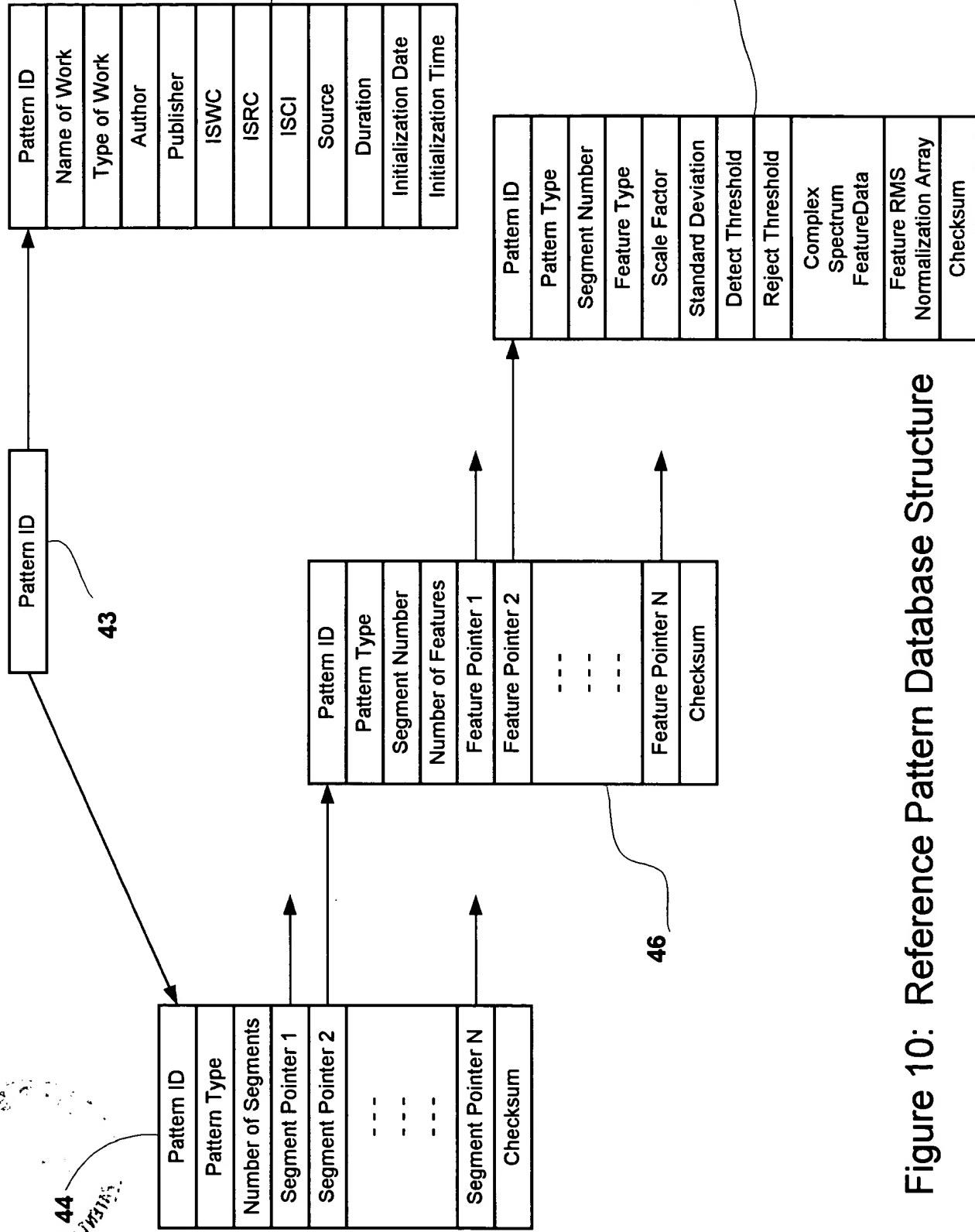


Figure 10: Reference Pattern Database Structure

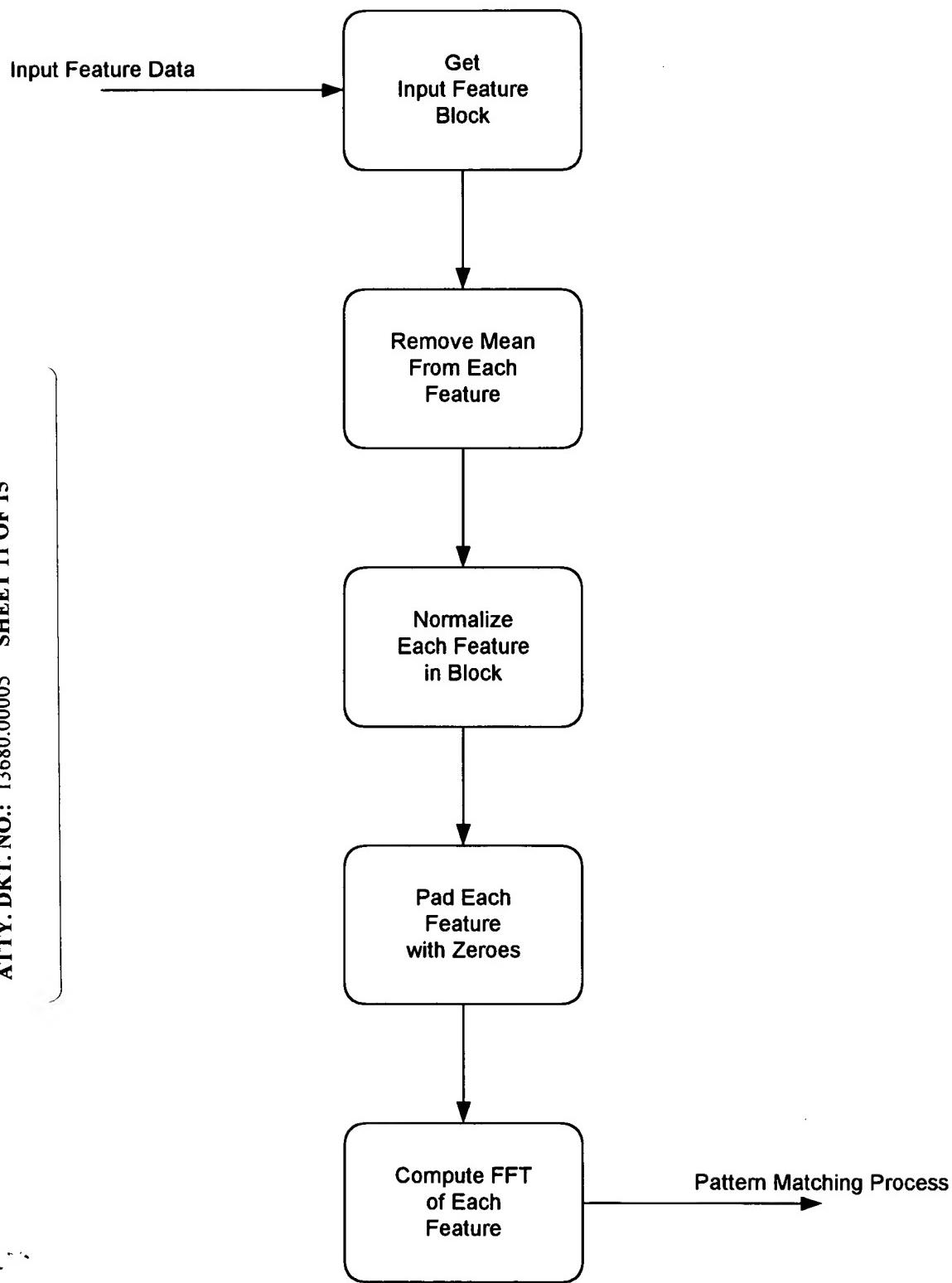


Figure 11: Real-Time Feature Block Pre-Processing

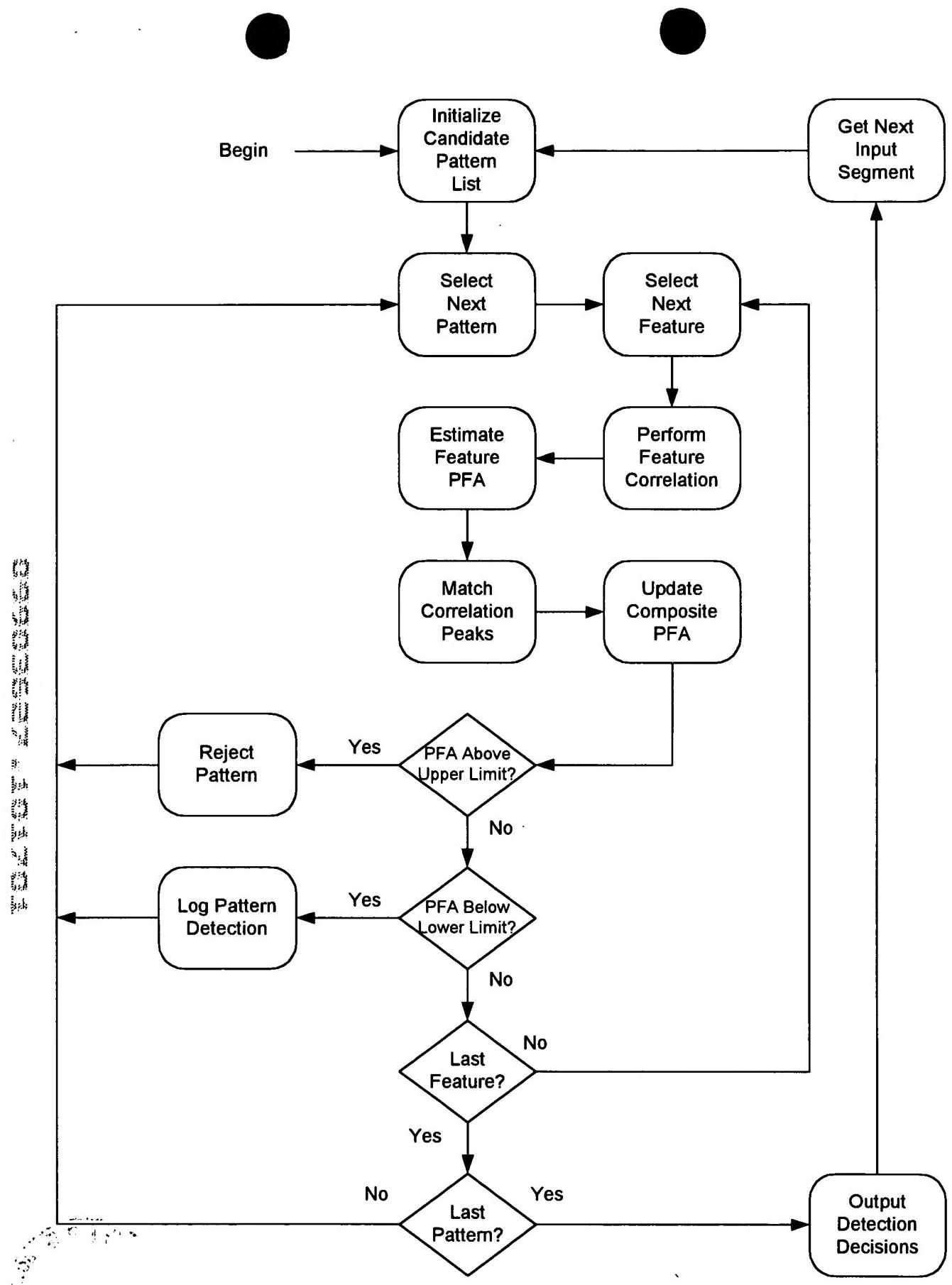


Figure 12: Multiple Feature Correlation Process

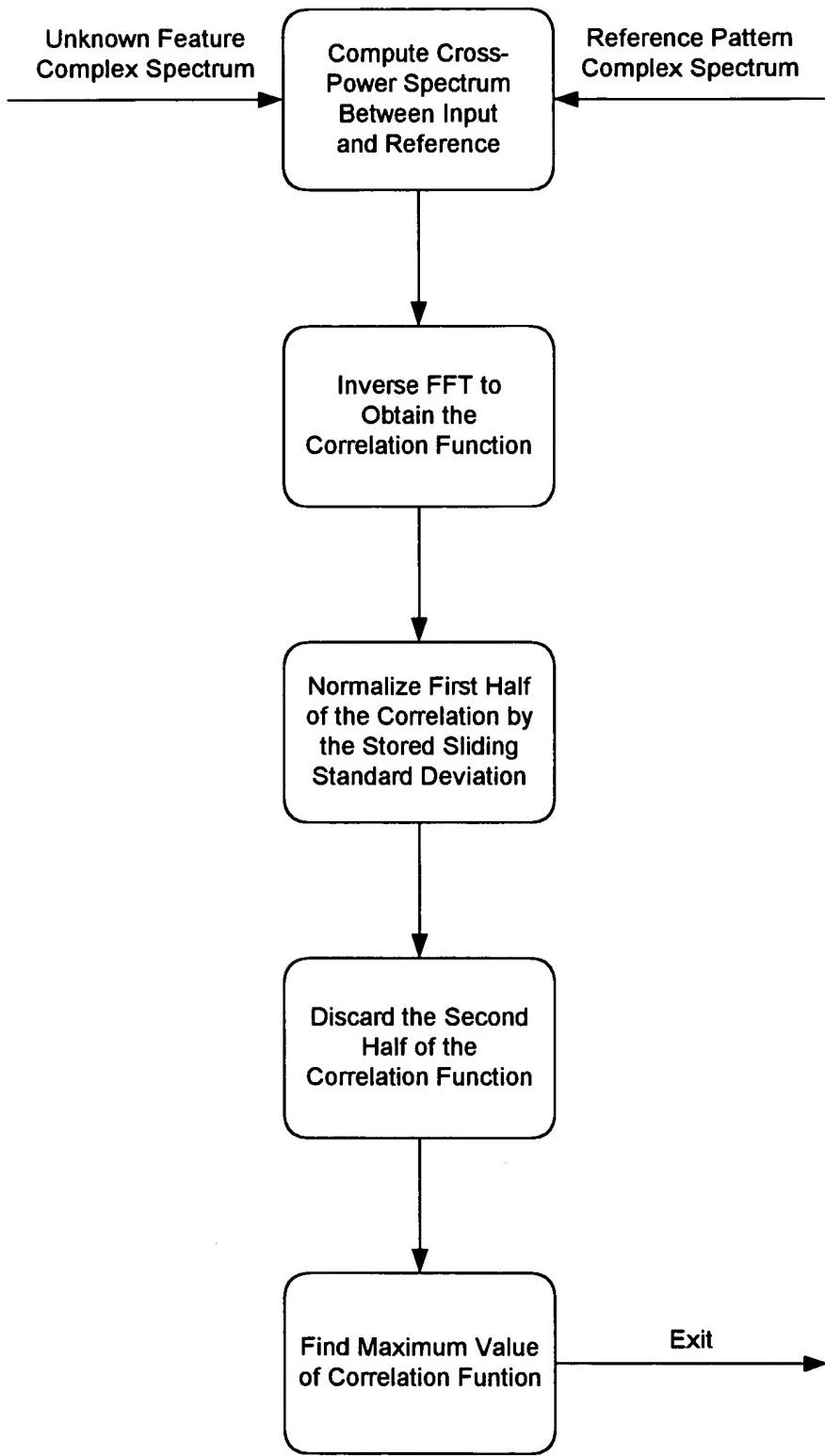


Figure 13: Feature Correlation Process

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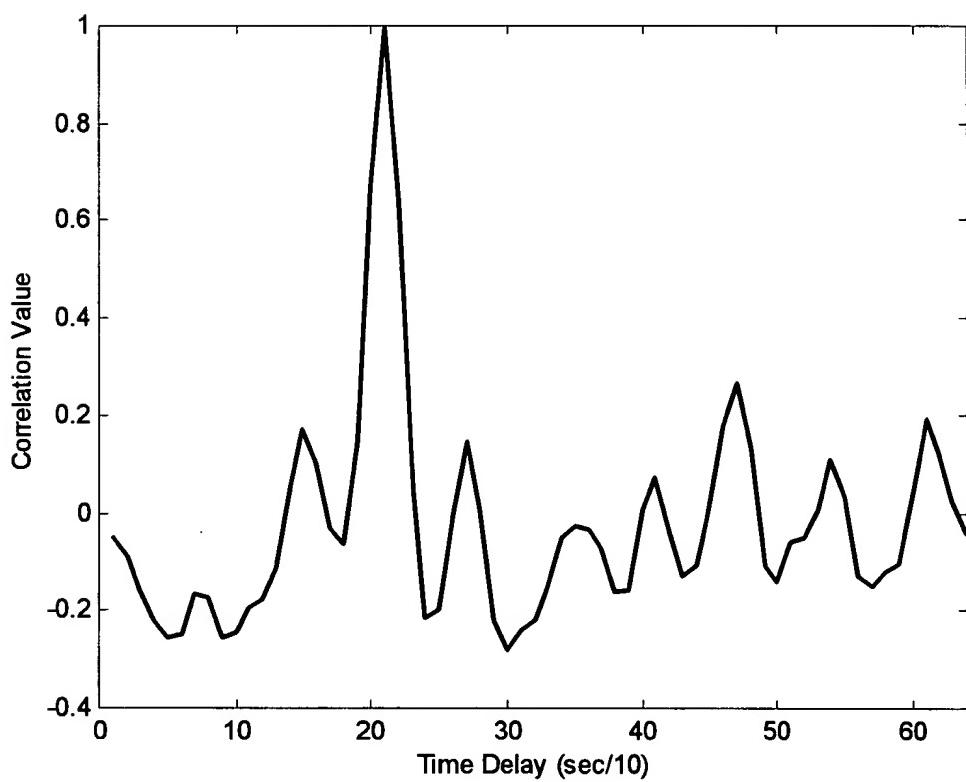
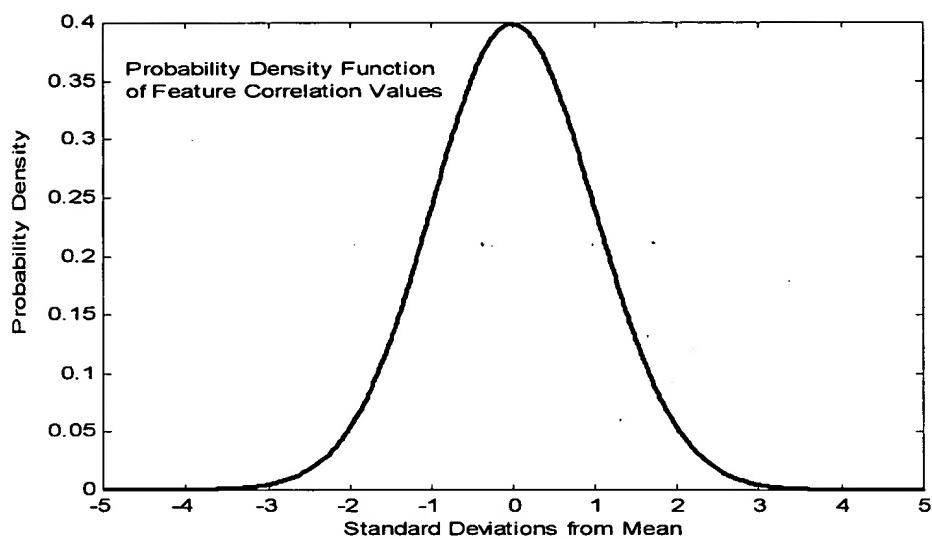
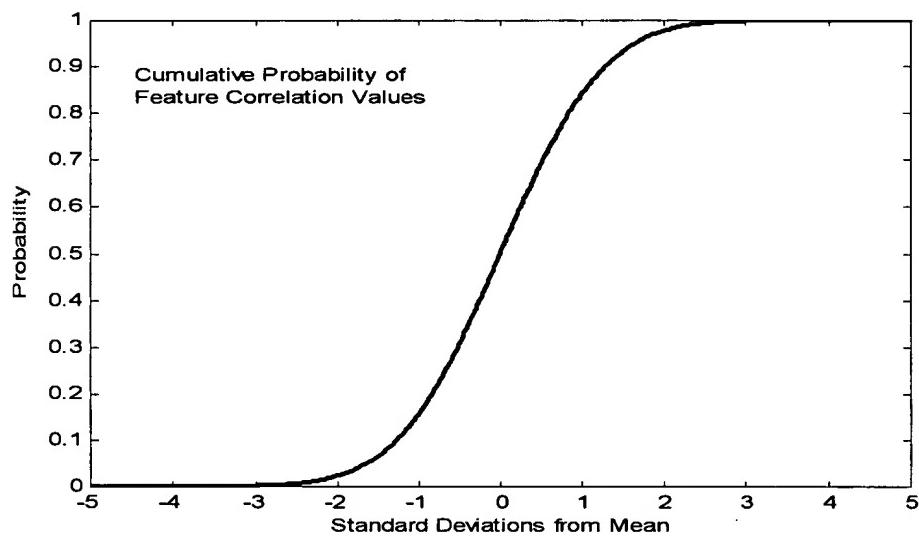


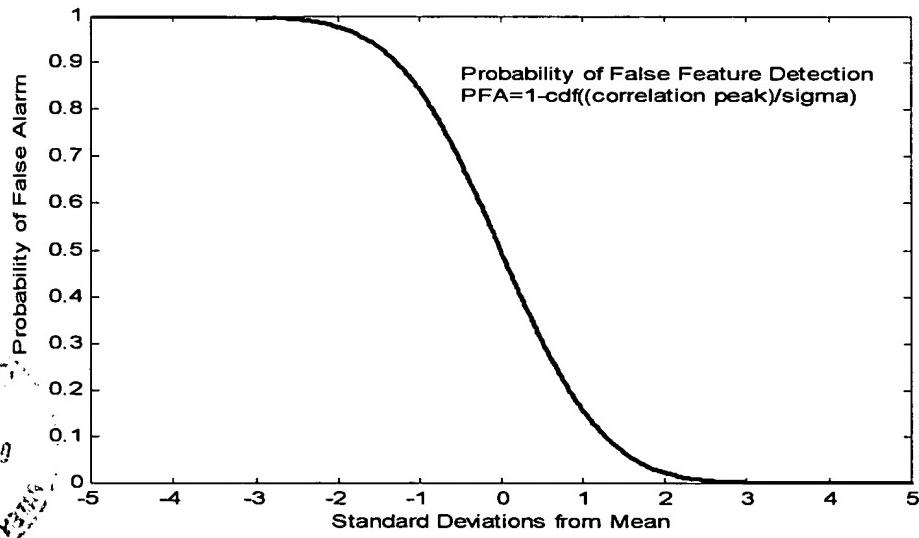
Figure 14: Example Feature Correlation Function



(A)



(B)



(C)

Figure 15: False Detection Estimation from Correlation Values